

## SEQUENCE LISTING

&lt;110&gt; INCYTE PHARMACEUTICALS, INC.

TANG, Y. Tom

CORLEY, Neil C.

GUEGLER, Karl J.

GORGONE, Gina A.

AZIMZAI, Yalda

KASER, Matthew R.

YUE, Henry

&lt;120&gt; COENZYME A-UTILIZING ENZYMES

&lt;130&gt; PF-0622 PCT

&lt;140&gt; To Be Assigned

&lt;141&gt; Herewith

&lt;150&gt; 09/185,217; unassigned

&lt;151&gt; 1998-11-03; 1998-11-03

&lt;160&gt; 10

&lt;170&gt; PERL Program

&lt;210&gt; 1

&lt;211&gt; 100

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; Incyte ID No: 1580751CD1

&lt;400&gt; 1

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			20						25					30
Pro	Cys	Gln	Arg	Asp	Gln	Asp	Gly	Tyr	Tyr	Trp	Ile	Thr	Gly	Arg
			35						40					45
Ile	Asp	Asp	Met	Leu	Asn	Val	Ser	Gly	Glu	Gly	Gln	Gly	Pro	Pro
			50						55					60
Ser	His	Leu	Ile	Asn	Ser	Ala	Pro	Leu	Thr	Thr	Pro	Ser	Arg	Ser
			65						70					75
Leu	Pro	Gln	Glu	Pro	Arg	Ser	Val	Leu	Trp	Pro	Asp	His	Val	Leu
			80						85					90
Ser	Val	Ala	Phe	Ser	Ser	Gly	Pro	Arg	Phe					
			95						100					

&lt;210&gt; 2

&lt;211&gt; 159

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; Incyte ID No: 1627889CD1

&lt;400&gt; 2

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His	Ser	Glu	Gln	Trp	Gln	Leu	Ser	Thr	Ser	Gln	Ile	Pro	Val	Gln	
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Gln	Met	His	Leu	Phe	Asp	Val	His	Asn	Tyr	Pro	Asp	Tyr	Val	Ser	
				50					55					60	
Ser	Gly	Gly	Gly	Phe	Gly	Pro	Ala	Asp	Asp	His	Gly	Tyr	Gly	Val	
				65					70					75	
Ser	Tyr	Ile	Phe	Met	Gly	Asp	Gly	Met	Ile	Thr	Phe	His	Ile	Ser	
				80					85					90	
Ser	Lys	Lys	Ser	Ser	Thr	Lys	Thr	Asp	Ser	His	Arg	Leu	Gly	Gln	
				95					100					105	
His	Ile	Glu	Asp	Ala	Leu	Leu	Asp	Val	Ala	Ser	Leu	Phe	Gln	Ala	
				110					115					120	
Gly	Gln	His	Phe	Lys	Arg	Arg	Phe	Arg	Gly	Ser	Gly	Lys	Glu	Asn	
				125					130					135	
Ser	Arg	His	Arg	Cys	Gly	Phe	Leu	Ser	Arg	Gln	Thr	Gly	Ala	Ser	
				140					145					150	
Lys	Ala	Ser	Met	Thr	Ser	Thr	Asp	Phe							
				155											

&lt;210&gt; 3

&lt;211&gt; 215

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; Incyte ID No: 1965888CD1

&lt;400&gt; 3

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Ser	Glu	Leu	Leu	Glu	Thr	Leu	Ala	Gln	Leu	Arg	Glu	Asp	Arg	Gln	
				20					25					30	
Val	Arg	Val	Leu	Leu	Phe	Arg	Ser	Gly	Val	Lys	Gly	Val	Phe	Cys	
				35					40					45	
Ala	Gly	Ala	Asp	Leu	Lys	Glu	Arg	Glu	Gln	Met	Ser	Glu	Ala	Glu	
				50					55					60	
Val	Gly	Val	Phe	Val	Gln	Arg	Leu	Arg	Gly	Leu	Met	Asn	Asp	Ile	
				65					70					75	
Ala	Ser	Ser	Ala	Val	Met	Gly	Leu	Ile	Glu	Thr	Thr	Arg	Gly	Leu	
				80					85					90	
Leu	Pro	Gly	Ala	Gly	Gly	Thr	Gln	Arg	Leu	Pro	Arg	Cys	Leu	Gly	

	95		100		105
Val Ala Leu Ala	Lys Glu Leu Ile Phe Thr Gly Arg Arg Leu Ser				
	110		115		120
Gly Thr Glu Ala	His Val Leu Gly Leu Val Asn His Ala Val Ala				
	125		130		135
Gln Asn Glu Glu	Gly Asp Ala Ala Tyr Gln Arg Ala Arg Ala Leu				
	140		145		150
Ala Gln Glu Ile	Leu Pro Gln Ala Pro Ile Ala Val Arg Leu Gly				
	155		160		165
Lys Val Ala Ile	Asp Arg Gly Thr Glu Val Asp Ile Ala Ser Gly				
	170		175		180
Met Ala Ile Glu	Gly Met Cys Tyr Ala Gln Asn Ile Pro Thr Arg				
	185		190		195
Asp Arg Leu Glu	Gly Met Ala Ala Phe Arg Glu Lys Arg Thr Pro				
	200		205		210
Lys Phe Val Gly	Lys				
	215				

&lt;210&gt; 4

&lt;211&gt; 720

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; Incyte ID No: 2816341CD1

&lt;400&gt; 4

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His Thr Ile Asn Pro	Ile Leu Leu Tyr Phe Ile His Phe Leu Ile	
	20	25 30
Ser Leu Tyr Thr Ile	Leu Thr Tyr Ile Pro Phe Tyr Phe Phe Ser	
	35	40 45
Glu Ser Arg Gln Glu	Lys Ser Asn Arg Ile Lys Ala Lys Pro Val	
	50	55 60
Asn Ser Lys Pro Asp	Ser Ala Tyr Arg Ser Val Asn Ser Leu Asp	
	65	70 75
Gly Leu Ala Ser Val	Leu Tyr Pro Gly Cys Asp Thr Leu Asp Lys	
	80	85 90
Val Phe Thr Tyr Ala	Lys Asn Lys Phe Lys Asn Lys Arg Leu Leu	
	95	100 105
Gly Thr Arg Glu Val	Leu Asn Glu Glu Asp Glu Val Gln Pro Asn	
	110	115 120
Gly Lys Ile Phe Lys	Lys Val Ile Leu Gly Gln Tyr Asn Trp Leu	
	125	130 135
Ser Tyr Glu Asp Val	Phe Val Arg Ala Phe Asn Phe Gly Asn Gly	
	140	145 150
Leu Gln Met Leu Gly	Gln Lys Pro Lys Thr Asn Ile Ala Ile Phe	
	155	160 165
Cys Glu Thr Arg Ala	Glu Trp Met Ile Ala Ala Gln Ala Cys Phe	
	170	175 180
Met Tyr Asn Phe Gln	Leu Val Thr Leu Tyr Ala Thr Leu Gly Gly	
	185	190 195

Pro	Ala	Ile	Val	His	Ala	Leu	Asn	Glu	Thr	Glu	Val	Thr	Asn	Ile	
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Ile	Thr	Ser	Lys	Glu	Leu	Leu	Gln	Thr	Lys	Leu	Lys	Asp	Ile	Val	
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Ser	Leu	Val	Pro	Arg	Leu	Arg	His	Ile	Ile	Thr	Val	Asp	Gly	Lys	
				230						235				240	
Pro	Pro	Thr	Trp	Ser	Glu	Phe	Pro	Lys	Gly	Ile	Ile	Val	His	Thr	
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Met	Ala	Ala	Val	Glu	Ala	Leu	Gly	Ala	Lys	Ala	Ser	Met	Glu	Asn	
				260						265				270	
Gln	Pro	His	Ser	Lys	Pro	Leu	Pro	Ser	Asp	Ile	Ala	Val	Ile	Met	
				275						280				285	
Tyr	Thr	Ser	Gly	Ser	Thr	Gly	Leu	Pro	Lys	Gly	Val	Met	Ile	Ser	
				290						295				300	
His	Ser	Asn	Ile	Ile	Ala	Gly	Ile	Thr	Gly	Met	Ala	Glu	Arg	Ile	
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Pro	Glu	Leu	Gly	Glu	Glu	Asp	Val	Tyr	Ile	Gly	Tyr	Leu	Pro	Leu	
				320						325				330	
Ala	His	Val	Leu	Glu	Leu	Ser	Ala	Glu	Leu	Val	Cys	Leu	Ser	His	
				335						340				345	
Gly	Cys	Arg	Ile	Gly	Tyr	Ser	Ser	Pro	Gln	Thr	Leu	Ala	Asp	Gln	
				350						355				360	
Ser	Ser	Lys	Ile	Lys	Lys	Gly	Ser	Lys	Gly	Asp	Thr	Ser	Met	Leu	
				365						370				375	
Lys	Pro	Thr	Leu	Met	Ala	Ala	Val	Pro	Glu	Ile	Met	Asp	Arg	Ile	
				380						385				390	
Tyr	Lys	Asn	Val	Met	Asn	Lys	Val	Ser	Glu	Met	Ser	Ser	Phe	Gln	
				395						400				405	
Arg	Asn	Leu	Phe	Ile	Leu	Ala	Tyr	Asn	Tyr	Lys	Met	Glu	Gln	Ile	
				410						415				420	
Ser	Lys	Gly	Arg	Asn	Thr	Pro	Leu	Cys	Asp	Ser	Phe	Val	Phe	Arg	
				425						430				435	
Lys	Val	Arg	Ser	Leu	Leu	Gly	Gly	Asn	Ile	Arg	Leu	Leu	Leu	Cys	
				440						445				450	
Gly	Gly	Ala	Pro	Leu	Ser	Ala	Thr	Thr	Gln	Arg	Phe	Met	Asn	Ile	
				455						460				465	
Cys	Phe	Cys	Cys	Pro	Val	Gly	Gln	Gly	Tyr	Gly	Leu	Thr	Glu	Ser	
				470						475				480	
Ala	Gly	Ala	Gly	Thr	Ile	Ser	Glu	Val	Trp	Asp	Tyr	Asn	Thr	Gly	
				485						490				495	
Arg	Val	Gly	Ala	Pro	Leu	Val	Cys	Cys	Glu	Ile	Lys	Leu	Lys	Asn	
				500						505				510	
Trp	Glu	Glu	Gly	Gly	Tyr	Phe	Asn	Thr	Asp	Lys	Pro	His	Pro	Arg	
				515						520				525	
Gly	Glu	Ile	Leu	Ile	Gly	Gly	Gln	Ser	Val	Thr	Met	Gly	Tyr	Tyr	
				530						535				540	
Lys	Asn	Glu	Ala	Lys	Thr	Lys	Ala	Asp	Phe	Phe	Glu	Asp	Glu	Asn	
				545						550				555	
Gly	Gln	Arg	Trp	Leu	Cys	Thr	Gly	Asp	Ile	Gly	Glu	Phe	Glu	Pro	
				560						565				570	
Asp	Gly	Cys	Leu	Lys	Ile	Ile	Asp	Arg	Lys	Lys	Asp	Leu	Val	Lys	
				575						580				585	
Leu	Gln	Ala	Gly	Glu	Tyr	Val	Ser	Leu	Gly	Lys	Val	Glu	Ala	Ala	
				590						595				600	
Leu	Lys	Asn	Leu	Pro	Leu	Val	Asp	Asn	Ile	Cys	Ala	Tyr	Ala	Asn	

	605		610		615
Ser Tyr His Ser	Tyr Val Ile Gly Phe	Val Val Pro Asn Gln Lys			
	620		625		630
Glu Leu Thr Glu	Leu Ala Arg Lys Lys	Gly Leu Lys Gly Thr Trp			
	635		640		645
Glu Glu Leu Cys	Asn Ser Cys Glu Met	Glu Asn Glu Leu Leu Lys			
	650		655		660
Val Leu Ser Glu	Ala Ala Ile Ser Ala	Ser Leu Glu Lys Phe Glu			
	665		670		675
Ile Leu Val Lys	Ile Arg Leu Ser Pro	Glu Pro Trp Thr Pro Glu			
	680		685		690
Thr Gly Leu Val	Thr Asp Ala Phe Lys	Leu Lys Arg Lys Glu Leu			
	695		700		705
Lys Thr His Tyr	Gln Ala Asp Ile Glu	Arg Met Tyr Gly Arg Lys			
	710		715		720

&lt;210&gt; 5

&lt;211&gt; 456

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; Incyte ID No: 3324214CD1

&lt;400&gt; 5

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	20	25 30
Ile Val Pro Ala Ile Phe Gly Val Ser	Phe Gly Ile Arg Lys Leu	
	35	40 45
Tyr Met Lys Ser Leu Leu Lys Ile Phe	Ala Trp Ala Thr Leu Arg	
	50	55 60
Met Glu Arg Gly Ala Lys Glu Lys Asn	His Gln Leu Tyr Lys Pro	
	65	70 75
Tyr Thr Asn Gly Ile Ile Ala Lys Asp	Pro Thr Ser Leu Glu Glu	
	80	85 90
Glu Ile Lys Glu Ile Arg Arg Ser Gly	Ser Ser Lys Ala Leu Asp	
	95	100 105
Asn Thr Pro Glu Phe Glu Leu Ser Asp	Ile Phe Tyr Phe Cys Arg	
	110	115 120
Lys Gly Met Glu Thr Ile Met Asp Asp	Glu Val Thr Lys Arg Phe	
	125	130 135
Ser Ala Glu Glu Leu Glu Ser Trp Asn	Leu Leu Ser Arg Thr Asn	
	140	145 150
Tyr Asn Phe Gln Tyr Ile Ser Leu Arg	Leu Thr Val Leu Trp Gly	
	155	160 165
Leu Gly Val Leu Ile Arg Tyr Cys Phe	Leu Leu Pro Leu Arg Ile	
	170	175 180
Ala Leu Ala Phe Thr Gly Ile Ser Leu	Leu Val Val Gly Thr Thr	
	185	190 195
Val Val Gly Tyr Leu Pro Asn Gly Arg	Phe Lys Glu Phe Met Ser	
	200	205 210

Lys	His	Val	His	Leu	Met	Cys	Tyr	Arg	Ile	Cys	Val	Arg	Ala	Leu	215	220	225
Thr	Ala	Ile	Ile	Thr	Tyr	His	Asp	Arg	Glu	Asn	Arg	Pro	Arg	Asn	230	235	240
Gly	Gly	Ile	Cys	Val	Ala	Asn	His	Thr	Ser	Pro	Ile	Asp	Val	Ile	245	250	255
Ile	Leu	Ala	Ser	Asp	Gly	Tyr	Tyr	Ala	Met	Val	Gly	Gln	Val	His	260	265	270
Gly	Gly	Leu	Met	Gly	Val	Ile	Gln	Arg	Ala	Met	Val	Lys	Ala	Cys	275	280	285
Pro	His	Val	Trp	Phe	Glu	Arg	Ser	Glu	Val	Lys	Asp	Arg	His	Leu	290	295	300
Val	Ala	Lys	Arg	Leu	Thr	Glu	His	Val	Gln	Asp	Lys	Ser	Lys	Leu	305	310	315
Pro	Ile	Leu	Ile	Phe	Pro	Glu	Gly	Thr	Cys	Ile	Asn	Asn	Thr	Ser	320	325	330
Val	Met	Met	Phe	Lys	Lys	Gly	Ser	Phe	Glu	Ile	Gly	Ala	Thr	Val	335	340	345
Tyr	Pro	Val	Ala	Ile	Lys	Tyr	Asp	Pro	Gln	Phe	Gly	Asp	Ala	Phe	350	355	360
Trp	Asn	Ser	Ser	Lys	Tyr	Gly	Met	Val	Thr	Tyr	Leu	Leu	Arg	Met	365	370	375
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Met	Thr	Arg	Glu	Ala	Asp	Glu	Asp	Ala	Val	Gln	Phe	Ala	Asn	Arg	395	400	405
Val	Lys	Ser	Ala	Ile	Ala	Arg	Gln	Gly	Gly	Leu	Val	Asp	Leu	Leu	410	415	420
Trp	Asp	Gly	Gly	Leu	Lys	Arg	Glu	Lys	Val	Lys	Asp	Thr	Phe	Lys	425	430	435
Glu	Glu	Gln	Gln	Lys	Leu	Tyr	Ser	Lys	Met	Ile	Val	Gly	Asn	His	440	445	450
Lys	Asp	Arg	Ser	Arg	Ser										455		

&lt;210&gt; 6

&lt;211&gt; 687

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; unsure

&lt;222&gt; 63

&lt;223&gt; a or g or c or t, unknown, or other

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; Incyte ID No: 1580751CB1

&lt;400&gt; 6

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&lt;210&gt; 7

&lt;211&gt; 1803

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; Incyte ID No: 1627889CB1

&lt;400&gt; 7

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&lt;210&gt; 8

&lt;211&gt; 1340

<212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <223> Incyte ID No: 1965888CB1

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